

# Riparian Forest Buffer Cost Estimate

CONSERVATION INFORMATION SHEET - Forestry Series

391



Natural Resources Conservation Service

Michigan



## Purpose of Riparian Forest Buffer

Riparian Forest Buffers improve and protect water quality by reducing the amount of sediment, pesticides, organic nutrients, and other pollutants in surface runoff, as well as in shallow groundwater flow. They provide wildlife habitat, maintain or restore water temperatures for fish and other aquatic organisms, and provide a source of large woody debris to form pools, help stabilize the channel bed, and create shelter for fish and other aquatic organisms.

## Making Cost Estimates

These three cost estimates for installing and establishing a riparian forest buffer compare weed control using herbicide (spray) to weed barriers. Weed barriers are placed at planting with a useful life

of three years and replace annual spray trips to control weeds. The third example shows using conifer instead of hardwood trees. The number of trees and shrubs in these examples is a five-row buffer with 2 rows of shrubs and 3 rows of trees based on 120 shrubs and 180 trees per acre. Refer to the Riparian Forest Buffer Conservation Job Sheet for calculation on the number of plants per acre and follow all label directions for pesticide use. An estimate of the cost per acre can be calculated using the average cost data. Each NRCS office will use their local prices to determine the average cost for components to estimate practice costs. Statewide average cost data may be used where local costs are not available.

Item	Shrub and Hardwood Spray Weed Control (1 acre)	Shrub and Hardwood Non-Spray Weed Control (1 acre)	Shrub and Conifer Spray Weed Control (1 acre)	Estimate for My Land
<b>Site Preparation:</b> Non-spray medium tillage or Spray Fall trip @ 6 hr/ac @ \$10 /hr; 1qt Roundup Regular @ \$35 /qt; Sprayer @ \$15 /ac	\$110	\$100	\$110	
<b>Planting Shrub and Hardwood Alternative:</b> 120 shrubs @ \$0.85 each; 180 hardwoods @ \$1.50 each; hand planting labor 8 hr/ac @ \$10 /hr	\$452	\$452	NA	
<b>Planting Shrub and Conifer Alternative:</b> 120 shrubs @ \$0.85 each; 180 conifers @ \$0.55 each; hand planting labor 8 hr/ac @ \$10 /hr	NA	NA	\$281	
<b>Pest Protection for Hardwoods:</b> 180 tree protectors, stakes & netting @ \$4 each	\$720	\$720	NA	
<b>Weed protectors for non-spray alternative:</b> 120 (each shrub) weed protectors @ \$0.55 each	NA	\$66	NA	
<b>Weed control Spray alternative:</b> Three Years of Fall spray trip 6 hr/ac @ \$10 /hr; 1 qt Roundup Regular @ \$35 /qt; sprayer @ \$15 /ac	\$330	NA	\$330	
<b>Total Costs (Based on 2001 State Average Prices)</b>	\$1,612	\$1,338	\$721	

**What if labor is “free”?** If the landowner does not want to include the value of their time? Labor is 20 hours at \$10 per hour or \$200. Subtract the \$200 from the total costs to determine the cash expense for the buffer.

**What about cost share?** If cost share is available, calculate the amount of cost share available and subtract that from the total cost to determine the landowner’s cost.

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